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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,648	04/15/2004	Jee-hong Min	Q80067	7696
23373	7590	12/01/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			DZIERZYNSKI, EVAN P	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/824,648

Applicant(s)

MIN ET AL.

Examiner

Evan Dzierzynski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/30/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Beeson et al. (US Pat 5396350).

As for claim 15, Beeson et al. discloses a light guide panel 3A of an edge-light type backlight system using a rod-shaped light source 4, the light guide panel comprising, a light incident surface 7 into which light enters, a light emitting surface (Fig 2) from which light is emitted, and an optical deflector 36 protruding from the light emitting surface, a cross-section of the optical deflector in parallel to the light emitting surface being in the shape of a trapezoid whose bottom side is a surface opposite to the light incident surface, the trapezoid-shaped cross-section being extended in a direction perpendicular to the light emitting surface.

As for claim 16, Beeson et al. further discloses a plurality of optical deflectors that are arranged along the light incident surface (Fig 2).

As for claim 17, Beeson et al. further discloses wherein a cross-section of the optical deflector in parallel to the light emitting surface is in the shape of an isosceles trapezoid (Fig 11).

As for claim 18, Beeson et al. further discloses, wherein the optical deflector further includes a third surface (the bottom side of 90), and the third surface is parallel to the light emitting surface.

As for claim 19, Beeson et al. further discloses the optical deflector is extended up to a surface opposite of the light incident surface as seen in figure 11, where the trapezoid shaped deflectors extend across the device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft (US Pub 2003/0147259) in view of Umemoto et al. (US Pat 6616289).

As for claim 1, Kraft discloses an edge-light type backlight system comprising a light guide panel including a light incident surface (Fig 1) into which light enters and a light emitting surface (Fig 1) from which light is emitted. Kraft teaches a light source which projects light to the light incident surface, and a polyhedral optical deflector including a first surface and a second surface, the first and the second surface are on opposite sides of a normal line orthogonal to the light incident surface and being more distant from each other as distance from the light incident surface increases, wherein the optical deflector is disposed on at least one of the light emitting surface and a surface opposite to the light emitting surface. Kraft fails to teach backlight system using

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a rod-shaped light source. Umemoto et al. teaches the use of a rod-shaped light source (column 8, lines 29+) in use with a similar backlight system. It would have been obvious for one of ordinary skill in the art to combine the rod-shaped light of Umemoto et al. with the device of Kraft, since the use of point source lights and rod/tube lights are equivalents in the art and the use of a rod-shaped source would reduce the number of parts in the device.

As for claim 2, Kraft further discloses a plurality of optical deflectors (Fig 1A) are arranged along the light incident surface.

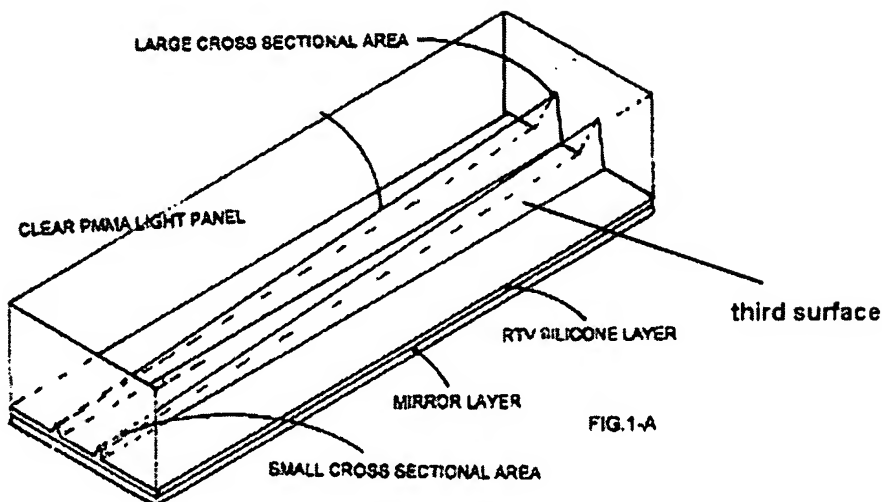
As for claim 3, Kraft further teaches that the optical deflector has the same refractive index as the light guide panel, since they are both made from the same material because of being integral parts of the device (as shown in Fig 1A).

As for claim 4, Kraft further discloses an optical deflector that is integrally formed with the light guide panel (Fig 1A).

As for claim 5, Kraft further discloses that the first surface and the second surface are symmetrical about the normal line orthogonal to the light incident surface (Fig 1A).

As for claim 6, Kraft further discloses that the first surface and the second surface are extended up to a surface opposite to the light incident surface (Fig 1A).

As for claim 7, Kraft further discloses that the optical deflector further includes a third surface (indicated below, the underside) opposing the light emitting surface, and the third surface is parallel to the light emitting surface.



As for claim 8, Kraft further discloses that a cross-section of the optical deflector in parallel to the light emitting surface is in the shape of a triangle whose oblique sides are the first and second surfaces and the bottom side is opposite to the light incident surface (Fig 1A).

As for claim 9, Kraft further discloses that a cross-section of the optical deflector in parallel to the light emitting surface is in the shape of a trapezoid whose oblique sides are the first and second surfaces and the bottom side is opposite to the light incident surface (Fig 1A).

As for claim 10, Kraft teaches a light guide panel of an edge-light type backlight system comprising a light incident surface (Fig 1) into which light enters, a light emitting surface (Fig 1), from which light is emitted and an optical deflector (Fig 1A) protruding from the light emitting surface and a surface opposite to the light emitting surface. It can be concluded from Kraft's drawings that a cross-section of the optical deflector in parallel to the light emitting surface being in the shape of a triangle whose bottom side is a surface opposite to the light incident surface, the triangular cross-section being

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extended in a direction perpendicular to the light emitting surface. Kraft fails to teach backlight system using a rod-shaped light source. Umemoto et al. teaches the use of a rod-shaped light source (column 8, lines 29+) in use with a backlight system. It would have been obvious for one of ordinary skill in the art to combine the rod-shaped light of Umemoto et al. with the device of Kraft, since the use of point source lights and rod/tube lights are equivalents in the art.

As for claim 11, Kraft teaches a plurality of optical deflectors are arranged along the light incident surface (Fig 1A).

As for claim 12, Kraft further discloses that the optical deflector further includes a third surface (see the drawing on page 3 of the instant application) opposing the light-emitting surface, and the third surface is parallel to the light-emitting surface.

As for claim 13, Kraft further discloses that the optical deflector further includes a third surface opposing the light emitting surface, and the third surface is parallel to the light emitting surface (Fig 1).

As for claim 14, Kraft further teaches that the optical deflector is extended up to a surface opposite to the light incident surface (Fig 1A).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Dzierzynski whose telephone number is (571)-272-2336. The examiner can normally be reached on Monday through Friday 7:00 am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on M-F (571)-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Evan Dzierzynski

11/22/2005


RENEE LUEBKE
PRIMARY EXAMINER